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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,517	07/31/2001	Takahiro Okada	P/1071-1422	3623

7590

04/04/2003

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EXAMINER

CHO, JAMES HYONCHOL

ART UNIT

PAPER NUMBER

2819

DATE MAILED: 04/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/919,517

Applicant(s)

OKADA ET AL.

Examiner

James H. Cho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 21, 2003 has been entered.

### ***Claim Objections***

2. Claim 1 is objected to because of the following informalities: "continuous, non-conductive" on line 9 appears to be --continuous and non-conductive--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Tada et al. (US PAT No. 6,087,911).

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Regarding claim 1, Fig. 14 and Fig. 15 of Tada et al. teaches a dielectric filter comprising a dielectric block (12); a plurality of conductive through holes (14) arranged in the dielectric block, each of the conductive through holes having an open end (14s are open) along a first surface of the dielectric block (12a); a respective coupling electrode (17 and 18) connected to each conductive through hole (14), each coupling electrode formed on the first surface of the dielectric block (12a) and extended at least to a first edge of the dielectric block (17 and 18 are extended to all edges of the first surface 12a in Fig. 14), the respective coupling electrodes having a continuous, non-conductive gap therebetween (each respective 17 and 18 is separated each other by the continuous and non-conductive rings that surrounds around 17 and 18; rings are denoted by dots) and generating a capacitance therebetween (capacitance between two separated electrodes is inherent in a dielectric filter) so as to couple the plurality of conductive through holes; and an outer conductor (15) arranged on outer surfaces of the dielectric block.

Regarding claim 2, Fig. 14 and Fig. 15 of Tada et al. teaches the dielectric filter according to claim 1, where the coupling electrodes further extend onto a second surface (bottom surface of 37 in Fig. 14 or top surface 15 in Fig. 15) of the dielectric block which intersects the first edge of the dielectric block (17 and 18 are extended onto the top surface 15 in Fig. 15 intersects with the first edge where the first edge is an edge that the top surface 15 and the back surface 12a intersect).

Regarding claim 3, Fig. 14 and Fig. 15 of Tada et al teaches the dielectric filter according to claim 1, further comprising input/output electrodes (17 and 18 on top surface 15 in Fig. 15; col. 10, lines 52-65) arranged on a second surface (top surface 15 in Fig. 15) of the dielectric block and extending from a second edge (17 and 18 extended from a second edge where the second edge is an edge that the top surface 15 and the back surface 12a intersects in Fig. 15), opposing the first edge (the first edge being an edge that the back edge 12a and the bottom edge of 37 in Fig. 15 intersect), to generate capacitance between the open ends of the conductive through holes and the input/output electrodes (capacitance between the open ends of the conductive through holes and the input/output electrodes is inherent in a dielectric filter).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-6 are rejected under 35 U.S.C. 102(b) as anticipated by Tada et al. (US PAT No. 6,087,911) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tada et al. in view of Saito et al. (US PAT No. 5,764,118).

Regarding claims 4-6, Tada et al. discloses the dielectric filter according to claim 3, but does not teach or fairly suggest a dielectric duplexer comprising a pair of the

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dielectric filters according to claim 3, a communication apparatus comprising a high-frequency circuit connected to the dielectric filter according to one of claims 1 and 2, or a communication apparatus comprising a high-frequency circuit connected to the dielectric duplexer as claimed. However, this limitation appears to be merely a statement of intent of the dielectric filter. It has been held that a recitation directed to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

However, if the limitation regarding a duplexer or a communication apparatus comprising of a pair of dielectric filters is not considered a mere statement of intended use, it is considered well-known in the art that a duplexer or a communication apparatus to be constructed with a pair of dielectric filters as taught in Fig. 36 of Saito et al. (col. 13, lines 1-14). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have constructed a duplexer or a communication apparatus having the dielectric duplexer of Saito et al. with a dielectric filter of Tada et al. for the purpose of providing an antenna device, i.e. duplexer designed with two dielectric filters.

#### ***Allowable Subject Matter***

5. Claim 7 is allowable over the prior art of record.

#### ***Response to Arguments***

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6. Applicant's arguments filed February 14, 2003 have been fully considered but they are not deemed to be persuasive regarding claims 1-6.

On pages 3- 4 of the amendment, applicant argues that "Tada et al. neither discloses nor suggests a dielectric filter having coupling electrodes separated by a continuous, non-conductive gap". However, the examiner notes that the continuous and non-conductive gap (denoted by dots) is present around the respective coupling electrodes 17 and 18 on the first surface 12a in Fig. 14 of Tada et al., and the respective gap is on the first surface 13a, which has the open ends of the conductive holes 14.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

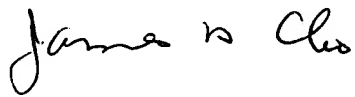
Tada et al. (US PAT No. 6,008,707) discloses an antenna duplexer.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Cho whose telephone number is 703-306-5442. The examiner can normally be reached on Monday-Friday, 05:30am-02:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 703-305-3493. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6251 for regular communications and 703-305-3432 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in cursive script that reads "James H. Cho".

James H. Cho  
March 31, 2003